Availability and Accessibility of Information and Communication Technology Facilities for Teaching Christian Religious Studies Curriculum in Public Secondary Schools in Enugu State, Nigeria

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Abstract
This study investigated the availability of information and communication technology facilities and its accessibility for teaching Christian Religious Studies in Public Secondary Schools in Enugu State. Three research questions were posed to guide the study. Using a descriptive research design the study made use of the population of 450 CRS teachers in all the government-owned secondary schools in the study area. The sample size of the study using mutli-stage sampling technique was 160 CRS Teachers. Two research instruments were used for data collection namely: Checklist for the Availability of ICTs in the schools and Questionnaire on accessibility of ICT facilities (CAQAA-ICT). The instruments were validated, and the reliability coefficient of the questionnaire was 0.76. Frequency and Percentage was used to analyze collected data on availability of ICT in schools whereas mean and standard deviation were used for research question two and three. The study found the availability of ICT facilities in schools were low, resulting in low accessibility for teaching CRS in government secondary schools in Enugu state and some of the factors hindering the accessibility were poor funding, inadequate power, lack of ICT skills and ICT expertise. It was recommended that government should ensure that required ICT facilities are provided in secondary schools and they are made accessible in all public secondary schools in the State.

Keywords: Available ICTs, CRS, Curriculum, Secondary School, Accessibility

Introduction

The importance of Information Communication Technology could never be overemphasized. Efido (2022) sees ICT as computers sets storage media (ie memory cards, flash drives, CD-ROMs, audio and video cassettes, films, picture, e-books, e-magazines) which are used in the classroom and secondary schools at large for processing, storing, presentation, communication and exchange of data and information in the teaching and learning processes of school subjects like CRS. Its use is unquantifiable in today's world, ranging from administration, transportation, health, agriculture, and education among others, which made the world a global village, creating a new landmark in sophisticating the educational system. It has made internet and websites, educational methods, techniques and resources more accessible. Generally, ICTs has gained prominence, and it is becoming one of the most important elements defining the competency of teachers and students at all levels of education. According to Nino (2018), the nation needs to produce ICT literate citizens and graduates who will build the infrastructure required to survive in this digitally-age of society. Thus, the objective of education is for society to survive and thrive in every era. In this technological era of ICT, its accessibility to both teachers and students is required in today's education, and any education system or educator with no ICT accessibility in today's basic educational requirement is lagging. As an academic one cannot imagine education without ICT (Bodo, 2019). It shows how significant ICTs are in education.

The provision of ICT facilities in education for teaching and learning in public and private schools is the sole responsibility of the government and school owners respectively. Government bears the responsibility of providing educational services to their citizens in public schools. Research findings has it that some of these facilities are not available in some public secondary schools (Jamoh, 2023). Awan (2021) also reported that availability of ICTs in public schools in some parts of Nigerian is inadequate; there is a dearth of ICT facilities in secondary schools in Kaduna as there were very few of such facilities available in most of the schools visited (Hanna et al., 2013). The most commonly used ICT facilities were computer set, which were adequately available in approximately 47% of the schools, non-availability of software and hardware infrastructure is a major factor challenging the use of computer and ICT in schools and not all public secondary schools across Adamawa state are equipped with computer and ICT resources (Gadzama, 2019) and most of the ICT facilities were not available and the little ones available were not accessible in most of the time (Asubiojo & Aladejana, 2019). The government has to own to their responsibility either by providing the proved lacked ICT facilities in schools or find private individuals or organization to aid the situation. This has to be done by finding out what and why the ICT facilities are not available and accessible in secondary schools.

When educational facilities and materials are inadequate, unavailable or not accessible it is as a result of one factor or the other. Hence, Efido (2022) noted that some of the challenges of ICT as a veritable tool for teaching and learning include: inadequate technical skill support, electricity supply, attitude of the school administrators, inadequate funding and provisions of ICT equipment, lack of interest and commitment by the government and religious sectors. Other technological factors include, low Internet connectivity bandwidth, unreliable telecommunication network, expensive hardware and software, expensive ICT facilities, unstable power supply and inadequate ICT facilities for networking (Oluwatosin, 2022). Managerial factors causing hindrance include, insufficient funding, poor policy on ICT

adoption and lack of good maintenance of ICT facilities which is in conformity with (Sagir et al., 2019). In the same vein, Ismail (2022) noted that ICT integration in schools suffers due to the non-availability of ICT resources and lack of teachers' relevant skills and knowledge. Winfred and Ozofor (2019) added insecurity and over protectiveness are the leading factor militating against accessibility of ICT resources. Any factor hindering the availability of ICT facilities in school affects the teaching and learning processes of those school subjects like Christian religious studies (CRS) in the school curriculum.

CRS is one of the academic subjects in Nigerian secondary school curriculum. Curriculum is the combination of instructional practices, learning experiences, and students' performance assessment that are designed to bring out and evaluate the target learning outcomes of a particular course. Christian Religious Studies (CRS) as a course is an academic discipline that focuses on the study of Christianity, its beliefs, practices, history, and impact on society. It typically covers a wide range of topics related to Christianity. Some common components you find in CRS curriculum include: biblical studies, theology, church history, ethics, comparative religion, ethics and Social Justice, Christian worship and sacraments, Christian mission, and evangelism: contemporary issues in Christianity. According to National Commission for College of Education (2004), Christian Religious Studies is defined as an academic discipline specifically designed for the moral and religious development of the nation. The actualization of the lofty objectives of Christian religious studies could be achieved in the practical sense through the effective use of information and communication technology in teaching and learning which paves way for qualitative education in the Nigerian educational system (Efido, 2022).

Therefore, for effective teaching to take place information communication technology facilities must be provided and teachers must have access to various types of resources, particularly in their areas of specialization (Odunlade, 2018). CRS education needs specific ICT facilities so as other subjects, availability of ICT in public senior secondary schools does not guarantee availability of ICT facilities for teaching CRS unless the specialized CRS ICT facilities are part of the available ICT facilities. As the government is sorely responsible for the provision of teaching and learning resources in secondary schools in Enugu State are they able to provide needed CRS ICT facilities adequately with the non-stop population increase and does CRS teachers have access to those provided ICT facilities to teach in the schools? These are the questions that necessitated the researcher to undergo this research: Availability and accessibility of information and communication technology facilities for teaching CRS in public secondary schools in Enugu State, Nigeria.

Despite the numerous importance of ICT facilities in the teaching and learning process of CRS and its ability to change the method of teaching from less attractive to more attractive and motivational state, it has been noted that such facilities are not available and accessible in secondary schools. Many factors could be responsible for this situation which include: inadequate supply of ICT, lack of curriculum review, inadequate technical skill support, poor electricity supply, attitude of the school administrators, inadequate funding and provisions of ICT equipment, lack of interest and commitment by the government. Several efforts have been made by the governmental and non-governmental organization to make ICT facilities readily available and accessible to public secondary schools in Nigeria by having a periodic review of school curriculum to fit in with the current trend in the educational system. Yet, the availability

and accessibility of existing ICT facilities is a concern with present growing population in public secondary schools. Additionally, many schools may not have equal availability of ICTs and teachers may not have equal and convenient access to these facilities. Disparities in access could result in unequal educational opportunities and hinder teachers' proficiency in the utilization of technology for teaching CRS. Hence, the researchers feel the need to investigate the availability and accessibility of ICT facilities for the teaching of CRS in public secondary schools in Enugu State, Nigeria. The following research questions were addressed:

1. What are the available ICT facilities for the teaching of CRS in Public Secondary Schools?
2. To what extent does CRS teachers access the available ICT facilities for teaching CRS in Public Secondary Schools?
3. What are the factors that hinders CRS Teachers from accessing ICT facilities for teaching CRS in Public Secondary Schools?

Methodology

This research adopted a descriptive research design which aims to accurately, and systematically describe a population, situation, or phenomenon. This design is appropriate because it helps researchers gain a deeper understanding of a specific issue and provides valuable insights that can inform future studies (Nworgu, 2006). The area of the study is Enugu state, Nigeria. The target population consists of all the 450 CRS teachers in public secondary schools in Enugu State.

The sample size for this study was 160 respondents. To compose this sample size, a multi-sampling process was employed. Firstly, all the six education zones were sampled namely: Agbani, Agwu, Enugu, Nsukka, Obollo-Afor and Udi education zone. Secondly, purposive sampling technique was used to select two education zones from the six education zones namely: Nsukka and Obollo-Afor. The reason for the purposive sampling is because the two selected zones are of the same senatorial zone, and they share same cultural and historical background. Thirdly, a simple random sampling technique was used to select two local government areas (LGA) each from the two selected education zones used for the study. This gave a total of four LGA. Fourthly, a simple random sampling technique was used to select five schools from each of the four selected LGA. This gave a total of 20 schools. And finally, a simple random sampling technique was used to select 8 Teachers from each schools selected This gave total respondents of 160 CRS teachers as the sample size.

A checklist for identifying available ICT facilities for teaching CRS with a section containing list of common ICTs used in teaching CRS in secondary schools with available or not available answer point scale. And a structured questionnaire on the extent teachers accesses available ICT facilities and factors that hinders CRS teachers from accessing the available ICT facilities to teach CRS in Government Secondary Schools in Enugu State. The instrument was face-validated by three experts. The experts were given drafts of the structured questionnaire which were based on the purpose of the study, and research questions. The experts' comments, as well as suggestions resulted in restructuring the purpose of the study, and research questions. It also resulted in restructuring some of the items and deleting the unnecessary ones which led to the production of the final copy.

The instrument was administered directly to the respondents. The rating scale was distributed manually to all the CRS teachers in the sampled schools with the permission of the principal of the sampled schools. The administration and retrieval of the questionnaire was done by the researcher, and this ensured accurate return of the 160-instrument given out. The data collected were analyzed using, frequency and percentage, mean and standard deviation.

Result

Data in table 1 shows that the following ICT facilities were available in more than 50% in the government senior secondary schools in Enugu state for teaching CRS: E-Library 17(85%), Computer/laptop 15(75%), Television 15(75%) Generator 15(75%), Printers 14(70%), Internet/Modem 17(85%), and Flash drive 15(75%). In the same vein, the following were not available: Computer accessories 14(70%), PowerPoint projector 19(95%), Radio tape 18(90%), Flipped board 14(70%), Photocopy machine 14(70%), Scanning machine 14(70%), Cell phone 17(85%), YouTube 14(70%) and, Google classroom 18(90%). Few ICT facilities for teaching CRS in secondary schools are most found in the schools under study.

Table 1. Available ICT Facilities

S/N		Available		Not Available		Total	
		(F)	(%)	(F)	(%)		
1	E-Library	17	85	3	5	20	100
2	Computer/laptop	15	75	5	5	20	100
3	Computer Accessories	6	30	14	70	20	100
4	Power point Projector	1	5	19	95	20	100
5	Television	5	25	15	75	20	100
6	Radio tape	2	10	18	90	20	100
7	Generator	15	75	5	25	2	100
8	Printers	14	70	6	30	20	100
9	Flipped board	6	30	14	70	20	100
10	Internet/modem	17	85	3	5	20	100
11	Flash Drive	15	75	5	25	20	100
12	Photocopy Machine	6	30	14	70	20	100
13	Scanning machine	6	30	14	70	20	100
14	Cell Phone	3	5	17	85	20	100
15	Videos	6	30	14	70	20	100
16	Youtube	6	30	14	70	20	100
17	Google Classroom	2	10	18	90	20	100

Measures of central tendency were computed to summarize the data on the extent CRS teachers access the available ICT facilities to teach in Public Secondary Schools in Enugu State, Nigeria in table 2. Measures of dispersion were computed to understand the variability of scores for the CRS teachers access to the available ICT facilities. In the secondary schools studied, items 22, 23 and 27 had mean rating within 2.50-3.49 and that shows high extent to which teachers access this ICT facilities. Items 18-21, 24-26, 31,32 and 34 had mean rating within 1.50-2.49 which shows the low extent of satisfaction derived in using the platforms. Items 28-30 and 33

falls within the range of 1.00-1.49 that shows very low extent of the accessibility. Furthermore, the cluster mean ($\bar{X}$= 1.93, SD = .25) was within the mean rating for low extent. This indicated low extent of the accessibility of the ICT facilities by the CRS teachers for teaching.

Table 2. Teachers Access to Available ICT Facilities for Teaching in Public Secondary Schools

S/N	ITEM			
		$\bar{X}$	SD	Dec
18	E-Library	2.08	.89	LE
19	Computer/laptop	1.56	.52	LE
20	Computer Accessories	1.91	.98	LE
21	Power point Projector	2.04	.72	LE
22	Television	2.50	.62	HE
23	Radio tape	3.15	.78	HE
24	Generator	1.64	.98	LE
25	Printers	2.04	.91	LE
26	Flipped board	1.66	.50	LE
27	Internet/modem	3.11	.78	HE
28	Flash Drive	1.49	.53	VLE
29	Photocopy Machine	1.49	.53	VLE
30	Scanning machine	1.42	.52	VLE
31	Cell Phone	1.50	.53	LE
32	Videos	1.90	.98	LE
33	Youtube	1.48	.53	VLE
34	Google Classroom	1.83	.48	LE
	Cluster Mean/SD	**1.93**	**.25**	**LE**

In table 3 above, Measures of central tendency were computed to summarize the data on the factors that hinders Teachers from accessing ICT facilities for teaching CRS in Public Secondary Schools in Enugu State, Nigeria. Measures of dispersion were computed to understand the variability of scores for the CRS teachers access to the available ICT facilities. The following are the results of this analysis; items 35 to 42 had mean ratings of 2.83, 2.91, 2.53, 3.18, 3.18, 2.83, 2.91, 2.79, and 3.33 and standard deviations of .79, .89, .67, .91, .85, .79, .89, and .93 respectively. The cluster mean of 2.89 indicated that CRS teachers agree that there are factors that hinders them from accessing ICT facilities for teaching CRS in Public Secondary Schools.

Table 3. Factors that hinders CRS Teachers from Accessing ICT Facilities for teaching CRS in Public Secondary Schools

S/N	ITEM			
		$\overline{X}$	SD	Dec
35	Lack of expertise in the use of ICT facilities to teach CRS	3.18	.91	A
36	Lack of interest in learning the usage of ICT facilities in teaching CRS	2.91	.89	A
37	Poor network connectivity	2.53	.67	A
38	Lack of mobile data by the teachers	2.83	.71	A
39	Inadequate mobile devices like smartphones, laptops, and palmtops by the students.	3.18	.85	A
40	Difficulty in using some ICT facilities	2.83	.79	A
41	Inadequate power supply.	2.91	.89	A
42	Lack of school-based support funds	2.79	.93	A
	Cluster	**2.89**	**.38**	**A**

Discussion

The findings of this study on research question one on the level of availability of ICT facilities in the government secondary schools being studied revealed that, ICTs like; E-Library, Computer/laptop, Television, Generator, Printer, Internet/Modem and Flash drive are available in more than 50% of the schools. Others like: Computer accessories, PowerPoint projector, Radio tape, flipped board, photocopy machine, scanning machine, Cell phone, YouTube and Google classroom are found in less than 50% of the schools. This is supported by the study by Adeolu and Mercy, (2013) where the findings indicated that the most used ICT facilities were computer set, printer, and bulletin board. Contrary, Ikolo (2020) reported that there was availability of most ICT tools to a moderate extent. These included: mobile phones, Internet connectivity, computers, OPAC, printers, and E-mail. The ICTs found available in most schools are low which makes them inadequate.

The findings of this study on research question two present the extent of accessibility of the available ICT facilities for teaching CRS. The extent of accessible ICT facilities are as follows: Television, Radio tape and Internet/modem were accessible to a high extent. E-Library, Computer/laptop, Computer Accessories, Power point Projector, Generator, Printers, flipped board, cell phone, videos and google classrooms were accessible to a low extent whereas, flash drive, photocopy machine and scanning machine were accessible to a very low extent. The extent of the accessibility of ICT facilities for the government secondary school CRS Teachers for teaching CRS is not encouraging. The study shows that some of the ICT facilities are available, however the accessibility is very poor which can be as a result of its inadequacy or other factors. This finding is in agreement with the findings of Jamoh (2023) who reported that less than 50% of teachers have access to ICT facilities in teaching geography and none of the respondent have access to projectors to convey geography lessons.

The findings of this study on research question three present the factors that hinder CRS teachers from accessing ICT facilities for teaching CRS in government secondary schools. The findings on the factors showed that even though there are ICT facilities available in schools, lack of expertise in the use of ICT facilities to teach CRS, Inadequate mobile devices like smartphones, laptops, and palmtops by the school was a major factor that was hindering CRS teachers from accessing the available ICT facilities for teaching in most of the schools. Other factors are: lack of interest in learning the usage of ICT facilities in teaching CRS, poor network connectivity, lack of mobile data by the teachers, difficulty in using some ICT facilities, inadequate power supply and lack of school-based support funds. This showed that the accessibility of available ICT facilities is hindered by some factors for teaching CRS. Supported by Ismail (2022) ICT integration in schools suffers due to the non-availability of ICT resources and lack of teachers' relevant skills and knowledge and Efido (2022) observed that inadequate technical skill support, electricity supply, attitude of the school administrators, inadequate funding and provisions of ICT equipment, lack of interest and commitment by the government and religious sectors are among the challenges facing the accessibility of ICT facilities. This result reveals that the secondary schools may experience setback in the utilization of available ICT facilities if the hindrance issues persist. The government and school authorities should make the relevant ICT facilities available to all government-owned secondary schools in the State. The access to the provided ICT facilities should be managed, monitored, and supervised by the schools. The schools should develop ways of encouraging CRS teachers to access the available ICT facilities in instructional delivery so as to make learning easier.

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